

BNSF Railway Company

Union Pacific Railroad Company

DRAFT

Response Action Work Plan

Wallace Yard and Spur Lines Wallace, Idaho

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Draft Response Action Work Plan Wallace Yard and Spur Lines, Wallace, Idaho

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List of Acronyms

ACP Asphaltic Concrete Pavement

ARARs Applicable or Relevant and Appropriate Requirements

BMPs Best Management Practices
BNSF BNSF Railway Company
CAB coarse aggregate base

CD Consent Decree

CERCLA Comprehensive Environmental Response, Compensation and Liability Act

EE/CA Engineering Evaluation/Cost Analysis

FROWW Functional Right-of-Way Width ICP Institutional Control Program

IDEQ Idaho Department of Environmental Quality

ITD Idaho Transportation Department

LDRs Land Disposal Restrictions mg/m³ milligrams per cubic meter mg/kg milligrams per kilogram

MM mile marker

MUTCD Manual of Uniform Traffic Control Devices

NCP National Contingency Plan NPRy Northern Pacific Railway

PMPS Project Materials and Placement Specifications

QA quality assurance
QC quality control
RA Response Action

RAD Response Action Design
RAWP Response Action Work Plan

RCRA Resource Conservation and Recovery Act

ROW right-of-way

RUA Residential Use Area

SFCDR South Fork of the Coeur d'Alene River

SOW Statement of Work

SPCC Spill Prevention, Control and Countermeasures Plan

TM Technical Memorandum

UPRR Union Pacific Railroad Company
USEPA U.S. Environmental Protection Agency

WIRR Washington and Idaho Railroad

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1. Introduction

This Response Action Work Plan (RA Work Plan) has been prepared in accordance with a Consent Decree (CD) between the United States of America and the State of Idaho, and Union Pacific Railroad Company (UPRR) and The BNSF Railway Company (BNSF) for the Wallace Yard and Spur Lines Site (Site) in Shoshone County, Idaho.

Mine waste found at various locations within the Site contains elevated concentrations of lead and other heavy metals and represents the primary human health and environmental concern. The Response Action Design (RAD) Drawings and the protective barriers, removals, and disposal components of work described within this report in Section 4 are focused on the mining-related contamination on the Site.

Response actions described within this RA Work Plan and RAD Drawings are part of a series of work elements that are to be conducted as part of a Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) response action. The CERCLA response action is being performed to address issues associated with mine waste-related contamination found at various locations within the site. Mine waste includes jig and flotation tailings, waste rock, concentrates and ores derived from mining activities.

1.1. Purpose and Scope

This RA Work Plan and associated RAD Drawings present activities to be performed by UPRR and BNSF to implement the response action identified in the U.S. Environmental Protection Agency (USEPA) Request for a Removal Action to be Conducted at the Wallace Yard and Spur Lines, Shoshone County, Idaho (Action Memo) (USEPA, 2008a) and Engineering Evaluation/Cost Analysis (EE/CA) for the Wallace Yard and Spur Lines (USEPA, 2008b) and specified in the Statement of Work (SOW) included as Appendix D to the Consent Decree (USEPA, 2009). The SOW presents the definitive statement of the scope of the response action. The RAD Drawings define the activities to be completed to meet performance standards established in the SOW. The RAD Drawings are supplemented by this RA Work Plan and the Project Materials and Placement Specifications (PMPS) to define the implementation of the response action. Specifically, this RA Work Plan presents:

Performance objectives and standards;

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- A discussion of the design rationale for the response measures; and
- Procedures for determining compliance with performance standards.

The purpose of this RA Work Plan is to define protective measures that are necessary to effectively control the risk of exposure to and migration of Mine Waste that may be located within the Site.

1.2. Site Description

The Site includes the area within Shoshone County, Idaho presently known as the "Wallace Yard" and associated former railroad lines along Canyon Creek and Ninemile Creek. The Site is comprised of four subareas. The four subareas to be addressed in accordance with the SOW are:

- Wallace Yard: The Wallace Yard covers approximately 43 acres between mile markers 78.5 and 79.8 along I-90 near Wallace Idaho. The area to be addressed by this RA Work Plan excludes the former railroad Rails-to-Trails Corridor, previously remediated areas, Interstate 90 (I-90), and the South Fork of the Coeur d'Alene River (SFCDR) (USEPA, 2008b) as shown in Figure 1.
- Hercules Mill: The area depicted on Figure 2 consisting of the foundations of the former mill location.
- Ninemile (former branch line "Spur Line"): The former Northern Pacific Railway (NPRy) spur line right-of-way running in Ninemile Canyon from mile marker 0 at the former Wallace-Mullan Branch railroad right-of-way to mile marker 4.75 as shown on Figure 3.
- Canyon Creek (former branch line "Spur Line): The former NPRy spur line right-of-way in the Canyon Creek drainage extending from mile marker 0 at the former Wallace-Mullan branch to approximate mile marker 6.75 near Burke, and the former Washington and Idaho Railroad (WIRR) spur line right-of-way also in the Canyon Creek drainage extending from mile marker 0 at the former Wallace-Mullan Branch to approximate mile marker 6.75 near Burke as shown on Figure 3.

The key human health and environmental concerns at the Site are related to the presence of jigs tailings, flotation tailings, waste rock, and concentrates and ores derived from mining activities ("mine waste"). Tailings, a component

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of mine waste, are present throughout the flood plain of the SFCDR, mainly due to the long history of direct discharge of tailings from sources, other than the Site, to the watershed. These fluvially-deposited tailings are possibly present within some portions of the Site. Tailings and waste rock may have also been used in some locations as ballast material and/or fill during the original construction of the Spur Lines and track structure within the Wallace Yard. Former operations of the Hercules Mill may have also resulted in the presence of mine waste contamination at the Site.

1.3. Background Information

In the early 1890s, railroad companies began using an area near the present town of Wallace, Idaho, known as the Wallace Yard, for railcar storage, switching, and other operations. In 1919, the Hercules Mining Company leased part of the area known as the Wallace Yard subject to a term of 50 years. The Hercules Mill processed ore from the nearby mines to produce concentrates for shipment to smelters. Hercules Mining Company was acquired by Hecla Mining Company in approximately 1947. Foundations of the former Hercules Mill are still present.

Over the past decades, several portions of the Site were abandoned and/or removed. Construction of Interstate 90 covered a significant portion of the Wallace Yard area resulting in capping of any contaminated soils present in the areas covered by the interstate including on and off ramps. Removals of soils from within the area of the visitor's center near Wallace also occurred.

In 2000, UPRR implemented a response action for the Wallace-Mullan Branch, which passes through the Wallace Yard. This response action included track salvage and tie removal as well as the construction of a protective barrier in the form of a recreational trail (Rails-to-Trails Project). The trail is a 10-foot wide path of asphalt with gravel barrier on either side. The total width of the remediated right-of-way (ROW) is 26 feet. The ROW between approximately mile marker 78.5 and 79.8 within the Wallace Yard was included in the Rails-to-Trails response action.

2. Performance Objectives and Standards

This section outlines the performance objectives and standards for the components of the response action addressed by the RA Work Plan.

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2.1. Performance Objectives

The objectives of the protective barriers, removal, and disposal components of work are to:

- Prevent unacceptable human exposure to mine waste and material contaminated with mine waste as described in the SOW;
- Minimize migration of mine waste and material contaminated with mine waste on and off of the Site;
- Minimize damage to non-abandoned structures, amenities, and vegetation;
- Protect barriers from damage due to unauthorized access;
- Properly dispose of any mine waste materials that may be generated during implementation of the removal action activities;
- Minimize dispersal of contamination to those portions of the Site that are not projected to receive response actions;
- Minimize disruptions and construction-related impacts to local traffic, drainage patterns, roads, utilities, property owners, and communities; and
- Remove and properly dispose of any concentrate accumulations that may be visually identified during implementation of the removal action.

2.2. Performance Standards

Performance standards for the protective barriers, removal, and disposal components of work represent the prescriptive requirements for these activities. These performance standards are specified within the SOW. Sections 4 through 8 of this work plan define procedures and environmental controls that will be implemented to achieve the performance standards.

2.3. Applicable or Relevant and Appropriate Requirements

The National Contingency Plan (NCP) provides that removal actions must, to the extent practicable, attain ARARs under federal or state environmental laws. An analysis of the Applicable or Relevant and Appropriate

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Requirements (ARARs) applicable to the Wallace Yard, Hercules Mill and Spur Lines was included in Appendix D of the EE/CA. The ARARs applicable to the response action discussed in this work plan include:

- Stormwater discharge provisions of Sections 301 and 303 of the Clean Water Act;
- Resource Conservation and Recovery Act (RCRA) Land Disposal Restrictions (LDRs) for contaminated materials requiring off-site disposal that are not accepted by the Big Creek Repository; and
- Chemical-specific ARARs for emissions of lead and particulates under the Clean Air Act and Idaho Air Pollution Act may apply to fugitive dust that may be generated during the construction activities.

3. Response Action Design Drawings

As indicated previously, the SOW presents a definitive statement of the scope of the response actions. The RAD Drawings define the implementation details for performance standards established in the SOW. The RAD Drawings are supplemented by this RA Work Plan and the PMPS to define implementation of the response action that are specified in the EE/CA (USEPA, 2008b). The work plan provides the supporting rationale and design basis for implementation of details specified within the RAD Drawings. This section documents factors that affect the design, describes the organization of the drawings and required components of work, describes the areas that are excluded from the work, and provides an overview of the corresponding PMPS.

The RA Work Plan supplements the RAD Drawings in defining the details of the following components of the response action:

- Removals and waste disposal
- Placement of protective barriers including:
 - gravel barriers
 - vegetated barriers
 - asphalt barriers

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- Access controls including:
 - o signage
 - fencing

Sections 4 through 6 of this RA Work Plan define how performance standards required under the SOW will be achieved. Section 7 of this work plan provides Best Management Practices (BMP) that will be used to minimize migration of contamination during construction. A general discussion of the monitoring that will be used to verify achievement of performance standards is provided in Section 8. Additional monitoring protocols are provided in the Project Quality Assurance/Quality Control (QA/QC) Plan. Section 9 includes a description of other required plans and Section 10 summarizes the reporting requirements under the SOW.

3.1. Factors Affecting the Design

The design details specified within the RAD Drawings were developed based on prior studies and projects in the area, knowledge of the site, and field reconnaissance activities. Previous reports include:

- Sampling efforts conducted from 1996 through 1999 (MFG, 1999);
 and
- USEPA. 2008b. Engineering Evaluation/Cost Analysis (EE/CA)
 Response Under the Comprehensive Environmental Response,
 Compensation and Liability Act (CERCLA). March 2008 Revision
 No. 1. Prepared by U.S. EPA Region X. Project No. 415-2328007 (013).

Due to the time of year of preparation of this work plan, more recent field reconnaissance activities have been limited.

3.1.1. Field Reconnaissance and Observations

Field reconnaissance and sampling activities conducted in support of the EE/CA identified the current land use and proximity of residential and high use areas at and adjacent to the Wallace Yard and the Spur Lines up Ninemile Creek and Canyon Creek. The field notes in the EE/CA are summarized in Table 2.

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As noted in the SOW, there are no residential use areas for the subareas of the Wallace Yard and Hercules Mill. Instead, common use areas are the focus of the Wallace Yard and Hercules Mill elements of work.

The information gathered during the EE/CA field reconnaissance included:

- Proximity of residential areas and high use areas to each of the subareas;
- The subarea setting including the topography, vegetation, and road access in order to provide design information for the removal action;
- Surface drainage control based on visual observation of existing drainage patterns; and
- Adjacent land use.

Additional field reconnaissance was conducted by ARCADIS during preparation of the design drawings to identify current site conditions and features for inclusion in the RAD Drawings. Due to the time of year of preparation of this work plan, more recent field reconnaissance activities have been limited.

3.1.2. Design Requirements with Consideration for Protection of Human Health

The overall objective of the design of the response action is compliance with the Action Memo (USEPA, 2008a). The Action Memo requires implementation of the response action to be protective of public health and the environment and to comply with the requirements of the CD. Development of the design of the response action was therefore completed to meet the requirements of the CD and Action Memo and to ensure public health and safety both during removal action construction activities and following completion of the removal action.

3.2. Organization of the Response Action Design Drawings

Elements and components of the response action are included in the RAD Drawings. The RAD Drawings are organized as follows:

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Wallace Yard Drawings:

Wallace Yard (WY) C1 through WY C9: Depict plan views of the Wallace Yard and Hercules Mill. The plan views identify the specific areas for removals, placement of protective barriers, and access controls as needed, including detail and section call-outs as appropriate and notes presenting information needed for construction of the removal action.

WY C10 through WY C12: provide details and sections to illustrate placement of barriers, construction of transition zones, and site-specific features to be addressed during construction of the removal action.

Spur Lines Drawings:

Spur Lines (SL) C1 through SL C22: Depict plan views of each segment of the spur lines of Canyon Creek and Nine Mile Creek. The plan views identify the specific areas for removals, placement of protective barriers, and access controls as needed, including detail and section call-outs as appropriate and notes presenting information needed for construction of the removal action.

SL C23 through SL C24: provide details and sections to illustrate placement of barriers, construction of transition zones, and site-specific features to be addressed during construction of the removal action.

The tables in this RA Work Plan provide information on the various components of the response action and cross reference individual drawings as applicable.

3.3. Excluded Areas

The RAD Drawings present the areas to be addressed by the removal action. These areas have been selected based on the EE/CA identification of areas for potential exposure to the existing contamination. Areas that are inaccessible by humans, and therefore do not represent areas of probable exposure through direct contact with mine waste, are excluded from the removal action as generally shown on the RAD Drawings. In general, the areas excluded from the removal action based on being inaccessible to humans are those areas with steep slopes, dense or hostile vegetation, seasonally submerged areas, and the areas immediately adjacent to or

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between Highway I-90 and the on- and off-ramps, with the exception of hydroseeding for erosion control as discussed in Section 7.

For the Spur Lines, the removal action will address the former location of the ROW along each Spur Line. Determination of the actual extent of the ROW to be addressed during the removal action will be dependent on field conditions and will follow the requirements in the SOW to ensure that the Functional Right of Way Width (FROWW) is addressed. The FROWW is defined as that portion of the former railroad ROW width used to physically support a rail line as evidenced by the visible, existing portions of the rail bed or embankment or the lateral extent of visually identifiable ballast. In addition, for purposes of work to be performed in this removal action, the FROWW must be accessible by humans and therefore represents an area of probable exposure through direct contact with mine waste. As examples, the FROWW will generally not include nor extend beyond the following physical boundary limitations:

- a steep (generally steeper than 2H:1V) slope, cut or hillside;
- a water body;
- dense wooded areas or hostile vegetation;
- bedrock at the surface:
- surface material that is predominantly rock particles greater than
 6 inches in diameter;
- a paved road (exclusive of road shoulders or unpaved roads);
- railroad embankment slopes, on the river or creek side, from the top of slope down to the edge of the water;
- areas that are seasonally submerged;
- areas covered with vegetation that is sufficiently dense to preclude easy access to the area; and/or
- other limitations approved by USEPA.

Additional areas that are excluded from this removal action are:

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- Areas that have been previously remediated such as the Trail Corridor between MM 78.5 and MM 79.8 of the former Wallace Branch of the UPRR and the Visitor's Center; and
- The SFCDR.

3.4. Project Materials and Placement Specifications

Materials that will be used for the completion of the components of this RA Work Plan are presented in the PMPS. The PMPS includes requirements for material properties, compaction and placement, subgrade preparation and vegetation seed mixes. The specifications also provide upper limit concentrations of zinc, lead, arsenic and cadmium as a basis for defining "clean" material. Specifications are included for the following components of the removal action:

- Asphalt barrier
 - Asphalt concrete pavement (ACP)
 - Coarse aggregate base (CAB)
 - Shoulder gravel
 - Surface sealing of the ACP
- Aggregate barrier
 - o CAB
 - Visual marker
- Gravel barrier
 - o Gravel
 - o Visual marker
- Vegetated barrier
 - o Growth medium
 - Visual marker
 - Turf sod
- Vegetation
 - Noxious weed spraying
 - Seed mixtures
- Erosion and Access Controls
 - Silt fence
 - Straw bales
 - Mulch
 - Erosion blankets
 - Chain link fence

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4. Response Action Activities

The response actions addressed within this RA Work Plan include placement of protective barriers in specific areas, removals of materials in specified areas, and appropriate disposal of removed materials. In addition, this RA Work Plan specifies access controls that will be implemented as appropriate to provide protection of human health. The specific locations of removals are shown on the RAD Drawings. A summary of the estimated barrier placement and removal volumes is provided in Table 2 for the Spur Lines and Table 3 for the Wallace Yard and Hercules Mill. In general, placement of barriers and/or removal and disposal of contaminated material has been specified to prohibit exposure to mine waste or contaminated materials consistent with the current and anticipated future land uses of the subareas under consideration. The response action activities to be completed at the Wallace Yard, Hercules Mill and Spur Lines are described in the following sections.

4.1. Contaminated Soil Removal

Contaminated soils in the vicinity of the Visitor's Center and EE/CA soil sample location WY-148 will be excavated as shown on the RAD Drawings. The materials will be transported off site for disposal as discussed in Section 5. Excavation activities will be conducted in such a manner as to prevent the spread of contamination or recontamination of surrounding areas. Excavation and material handling equipment will be decontaminated per the methods specified in Section 9.3 prior to removal from the site, and any excavated materials stock-piled on site prior to off-site transport will be placed on plastic sheeting and appropriate run-on/run-off controls used to prevent the spread of contaminated materials as discussed in Section 8.

In addition to the areas identified for removal of contaminated materials as part of the removal action, other small areas may require removal of materials in order to properly place the protective barriers as indicated on the RAD Drawings. In order to place barriers in a manner that limits erosion and provides for a transition at the barrier edges, minor removals may be required prior to barrier placement in the transition areas such as the termination of the barriers, along ditches, roads, fixed surfaces, and other features. Material will be graded or removed from an area to provide a smooth surface transition of the barrier to an existing feature or the adjacent ground surface. For example, along an asphalt road, a barrier will not be placed on top of the existing adjacent ground. An excavation, parallel and adjacent to the road, will be made that provides for the barrier to be placed and have the same final grade that existed prior to construction and that matches with the top of

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the road grade. This will eliminate potential destruction of this portion of the barrier due to erosion, wear, or other factors.

In other areas that provide drainage, existing materials may also require excavation prior to placement of the barrier. These drainage areas tend to be along roadways or parallel to an elevated portion of the rail bed. Following excavation, the barrier will be placed in a manner such that the existing drainage pattern is maintained and has the same final grade that existed prior to construction.

In most cases, the material excavated for construction of the transition areas will be placed within the area that will have the protective barrier placed over it. If this is not possible, the material will be transported off site for disposal as described in Section 4.4.

4.2. Debris Removal

Miscellaneous debris material is defined as individual pieces of non-tie debris that are in excess of a nominal 6 inches measured in any dimension. Individual pieces of ties that exceed a nominal 9 inches measured in any dimension shall be removed and disposed as described in Section 4.4. The miscellaneous debris material may include, but is not necessarily limited to: abandoned scrap metal, paper, batteries, scrap lumber, remnants of wooden loading docks, or wooden drainage sloughs. Miscellaneous debris material is identified on sheets WY C6 and WY C9 of the RAD Drawings, however, additional materials may be identified during construction activities and will be removed and disposed in conjunction with other removals.

4.3. On-Site Disposal

On-site disposal will consist of spreading waste material and covering with an appropriate barrier, as discussed in Section 4.5. Waste materials that will be allowed for on-site disposal will be of small enough particle size to ensure that the materials will not affect the barrier placement or long-term performance. Waste material disposed on site will be co-mingled with soils, ballast, sediments or other similar materials such that there will not be void spaces within the placed material that could result in future settlement that would be detrimental to the planned protective barrier.

4.4. Off-Site Disposal

Miscellaneous trash, rubbish, and waste material either present on site or generated in the performance of the Work that shall be disposed off site in

compliance with applicable laws and regulations including the Off-site Disposal Rule (40 CFR 300.440). The USEPA shall be notified of off-site disposal activities. Such disposal shall only occur in permitted disposal facilities. Material that is contaminated with mine waste based on visual presence of soil or concentrate adhered to the waste materials will be disposed off-site at the Big Creek Repository if the material meets the acceptance limits for the repository. The Big Creek Repository acceptance limits for metals concentrations are summarized in Table 1 (URS, 2004). In addition, materials must meet other acceptance criteria for disposal at the Big Creek Repository. The materials must pass the paint filter test for free liquids. No material containing listed or regulated constituents, other than Bevill-exempt mining-related waste, may be disposed at the repository. In addition, no uncontaminated soil or building debris or highly concentrated material will be disposed of at the repository without prior approval by the Idaho Department of Environmental Quality (IDEQ) and USEPA.

Table 1. Acceptance Limits for Big Creek Repository

Information	Antimony	Arsenic	Lead	Cadmium	Zinc
Source	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Big Creek Repository	Max: 623	Max:3,610 Min: 100	Max:67,100 Min: 700	Max: 194	Max:25,800

Source: URS, 2004.

Contaminated materials which exceed Big Creek's maximum acceptance limits will go to an approved hazardous waste facility, following appropriate manifesting procedures. Material transported for disposal shall be covered by tarps to prevent release while en route to the disposal facility.

Waste materials that do not have visual accumulations of soil or concentrate materials may be disposed at a local solid waste disposal facility and will be disposed in accordance with the facility requirements and local, State and Federal regulations.

4.5. Protective Barriers

Protective barriers are used as a means of isolating the public from exposure to potentially hazardous materials in portions of the Wallace Yard, Hercules Mill Site, and Spur Lines. Specific location requirements for the barriers are shown on the RAD Drawings.

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The barriers will consist of clean, durable materials that effectively isolate underlying contaminated materials from direct contact by humans or through contact from wind or water erosion of the contaminated materials. Locations of protective barriers are shown on the RAD Drawings and summarized in Tables 2 and 3. The types of barriers that shall be used for this removal action are identified in the following sections.

4.5.1 Asphalt Barriers

Asphalt barriers shall be placed at the locations on the Spur Lines as generally specified by the RAD Drawings SL C2 through SL C22, and summarized in Table 2. The exact FROWW to be addressed by the asphalt barrier will be determined in the field based on field conditions. Asphalt barriers will be constructed with the materials and in the manner specified in the PMPS and in accordance with the applicable Idaho Transportation Department (ITD) requirements and the Institutional Control Plan (ICP) for the Silver Valley administered by the Panhandle Health District. The asphalt barrier will consist of a coarse aggregate base layer overlain by an asphalt concrete pavement layer. The subgrade will be prepared as described in the PMPS to ensure the stability of the asphalt barrier.

4.5.2 Gravel and Vegetated Barriers

The specific choice of gravel or vegetated soil as the barrier material has been selected to be consistent with current and anticipated future land uses (reflecting consideration of both durability and aesthetics criteria). Vegetated soil barriers are specified in areas adjacent to established parks or other high-pedestrian-use areas. Gravel barriers are used in the remainder of the common use areas. The specific choice of gravel or vegetated soil at a given location is consistent with the performance standards specified in the SOW.

The locations and extents of the gravel and vegetated barriers are specified in RAD Drawings as follows:

- WY C2 through WY C9
- SL C2 through SL C22

The placement details and sections for the barriers are depicted in RAD Drawings:

- WY C10 and WY C11
- SL C23 and SL C24

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Materials that will be used for these barriers will meet the PMPS requirements including the clean material requirements for imported soils.

4.5.2.1 Gravel Barriers

The gravel barrier locations are specified on the RAD Drawings and consist of either a minimum 6-inch or minimum 12-inch thick barrier depending upon use considerations in the area of the gravel placement. Placement details and sections for the gravel barriers are depicted on RAD Drawings WY C10, WY C11 SL C23, and SL C24. The exact FROWW to be addressed by the gravel barriers on the Spur Lines will be determined in the field based on field conditions. The gravel barriers shall consist of clean material as specified in the PMPS. The subgrade shall be prepared prior to placement of the gravel barrier as described in the PMPS, including any necessary regrading of the area to ensure positive drainage and minimize erosion following placement of the barrier.

Visual markers shall be installed beneath gravel barriers, except where the gravel barrier underlies asphalt barriers or shoulder gravel. The visual marker shall be placed as specified on RAD Drawings WY C10, WY C11 SL C23, and SL C24. The visual marker, which consists of a geotextile material with sufficient durability and strength requirements to provide a long-term visual barrier between the protective barrier and contaminated materials, shall meet the PMPS requirements.

4.5.2.2 Vegetated Barriers

Vegetated soil barriers are specified in the RAD Drawings as a minimum 12-inch vegetated soil layer. A visual marker consisting of a geotextile material with sufficient durability and strength requirements to provide a long-term visual barrier between the protective barrier and contaminated materials will be placed beneath the vegetated soil barrier. The vegetated soil barrier consists of the specified thickness of clean growth medium overlain by a vegetation layer. The clean growth medium shall meet the specifications in the PMPS. The subgrade shall be prepared prior to placement of the area to ensure positive drainage and minimize erosion prior to placement of the clean growth medium. Vegetation shall be placed in accordance with the PMPS.

5. Erosion Control/Revegetation

Several areas of the site currently have steep slopes and/or exposed soils that require stabilization as part of the response action. The hillside above the Hercules Mill site former foundation area has bare patches that may allow for

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erosion of soils. In addition, the slopes immediately adjacent to the on- and off-ramps to I-90 and the interstate itself will be evaluated to determine the need for revegetation to prevent erosion. This evaluation will be conducted at the beginning of the construction season during the active growing season to allow for identification of bare patches that need revegetation. Revegetation will be accomplished through hydroseeding in accordance with the broadcast rates and seed mixes specified in the PMPS. Following hydroseeding, the areas will be mulched and a tackifier applied.

6. Access Controls

Access controls assist in minimizing unauthorized use in an area and prevent human contact with remaining contaminated materials. Temporary access controls will be used to prevent access to active construction areas during the removal action activities and are described below. In addition, permanent access controls will be installed at Hercules Mill. Access controls consisting of chain-link fence and signage will be installed around the former foundation area at the Hercules Mill site. Access to some site areas may also be prevented through the presence of hostile vegetation. These permanent access controls are also described below.

6.1. Temporary Access Controls

Temporary access controls will consist of the use of temporary fencing, cones, construction tape, signage and/or jersey barriers, as appropriate for the areas to be addressed in the removal action to ensure the safety of the surrounding community. These access controls will be used to ensure that members of the public are prohibited entry into active construction areas. In addition, any open excavations or stockpiles of contaminated materials will be surrounding by appropriate access controls to prevent entry into the excavation or contact with the materials. Use of temporary fencing and other access controls will be in accordance with State and local regulations and requirements.

6.2. Permanent Fencing

Fencing is provided in specific areas of Hercules Mill to limit access to areas that are unsuited for public use. These particular areas may pose an exposure to contamination or be physical hazard areas. Fencing shall meet the materials requirements specified in the PMPS. Access controls will be provided around the Hercules Mill to limit access, as shown in RAD Drawing WY C5. Details of the fencing to be used are shown on RAD Drawing WY C12.

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6.3. Signage

Temporary signage will be provided during the implementation of the removal action as needed to provide for the health and safety of workers and the surrounding public. Temporary signage, barricades, flashers, and other safety measures will be used in accordance with the Manual of Uniform Traffic Control Devices (MUTCD), and appropriate State and local regulations regarding traffic safety will be followed during construction.

Permanent signage will include "No Trespassing" signs to be installed on the chain-link fence around the former Hercules Mill site, as depicted on the fence detail on RAD Drawing WY C12.

7. Best Management Practices for Control of Contaminant Migration

Best Management Practices (BMPs) will be employed for control of contaminant migration that may result from the response action work. The primary potential sources of contaminant migration that could be created during implementation of the work discussed within this RA Work Plan include:

- Fugitive dust generated during activities on the Wallace Yard, Hercules Mill or Spur Lines, access roads, turnouts and/or decontamination areas:
- Transport of suspended solids from work areas by surface water runoff;
- Improper decontamination of materials for disposal and/or equipment leaving the work site; and
- Potential spills associated with removal action activities.

BMPs shall be used within active work areas to control contaminant migration associated with the above potential sources. For purposes of this requirement an active work area is an area where construction associated with the work is occurring or where contaminated materials have been disturbed by construction activities. Application of these BMPs is discussed below.

7.1. Fugitive Dust Control

Potential source areas for fugitive dust include work areas impacted by mechanized equipment collecting and/or transporting materials, hauling equipment, excavation equipment, and/or grading equipment. The need to

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employ BMPs will be determined by visual inspection and by downwind particulate monitoring using a MiniRAM particulate monitor. Monitoring will be conducted continuously during excavation activities and as needed during placement of barrier materials. If readings on the MiniRam exceed 0.5 milligrams per cubic meter (mg/m³) for lead or 2.5 mg/m³ for total dust, wet dust suppression methods will be instituted. The standard of no fugitive dust shall not be applied for traffic on public roads. However, the controls to prevent the emissions of fugitive dust from the loads within haul vehicles shall be applicable as well as the requirements to minimize tracking of dirt onto public roads.

If construction activities results in creation of excessive dust, appropriate dust control measures will be implemented. The BMP control measures identified below will be followed for dust control at the site during the removal action activities:

- Maintain low speed for construction vehicles to minimize the amount of dust created by heavy equipment and trucks;
- Place gravel on sections of non-paved haul roads that are heavily traveled;
- Apply water or chemical dust suppressants to roads and disturbed areas as needed. Dust palliatives containing brine, or other materials that are harmful to surface water or vegetation shall not be used. The application will be made in such a manner as to limit: the formation of puddles and muddy conditions; over spray of chemical dust suppressants in areas adjacent to surface water bodies, wetlands, or other sensitive habitats; and/or prevent the flushing of materials off of the work area;
- Clean paved roads via water washing periodically to remove dirt that is tracked onto the roads:
- Clean vehicles before entering public roads to prevent tracking as specified in Section 7.3 below;
- For loads of material to be transported on or off site, allow freeboard between the load and the top of the dump body to prevent release. Loads of contaminated material shall be tarped prior to leaving the work area;
- Grade and shape stockpiles to minimize surface area;

- Apply water, chemical dust suppressants, or covers to stockpiles as needed; and
- Limit vehicular traffic in disturbed areas to the extent practicable.

7.2. Control of Sediment Transport by Surface Water Run-off

Disturbed, non-ballast materials within work areas may be subject to transport by surface water run-off during precipitation events. The granular nature of ballast is not generally conducive to surface water transport during normal storm events. Sedimentation controls will be required at the following locations:

- Down gradient of active work areas on exposed slopes to control transport of sediments from the work area;
- Staging and decontamination areas; and
- Accumulation areas.

Care shall be taken to conduct construction activities in a manner that minimizes dispersal of the ballast.

BMPs that will be employed to control the surface water run-off transport of contaminants from the railroad grade are the use of temporary filtering devices, such as silt fences or straw bales, at appropriate locations to ensure that materials do not migrate to rivers, streams, storm sewers, or other drainage ways.

These types of sedimentation controls will be installed in compliance with the requirements in the *State of Idaho Catalog of Storm Water Best Management Practices for Idaho Cities and Counties* Grading of the active work areas shall be performed where necessary to promote drainage to these control measures. At designated decontamination and/or staging areas, settling basins or similar measures shall be used as necessary to prevent potentially contaminated materials from reaching adjacent wetlands and/or surface waters. Required sedimentation controls shall be maintained throughout the construction activities. Inspection of the sedimentation controls shall be conducted as necessary to prevent failure. Repairs, removal, and disposal of accumulated sediments shall be conducted as necessary to maintain the function of the controls. Repairs and removals shall be performed in a timely manner after the need for repairs is identified.

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7.3. Decontamination Activities

Decontamination for the RA activities consists of the cleaning of surficial accumulations of material from vehicles and mobile equipment prior to the equipment leaving a controlled work area.

Equipment decontamination procedures shall be implemented to prevent migration of contaminated materials from work areas to surface water bodies, wetlands, and other sensitive habitats. Decontamination shall be implemented whenever equipment leaves a controlled work area. For purposes of this provision, a controlled work area shall be an area where contaminated material has been disturbed by construction activities. The appropriate work area egress location for equipment decontamination shall include a consideration of the disturbed areas that are susceptible to tracking of contaminants and shall be subject to the review and approval of the USEPA and IDEQ. Surficial materials shall be removed from the tires and bodies of trucks and heavy equipment by washing. Wheel washes will be set up at construction exits if tracking onto the roadway is not adequately controlled through street cleaning. Adequate decontamination will be determined by visual inspection.

When using water for decontamination, provisions shall be made for control of the water and collection of sediment. The decontamination water will be filtered through a geotextile filter fabric having an apparent opening size to trap particles that would be retained on a #200 sieve. The filtered decontamination water could then be released to any area that will not be subject to removal or the placement of a protective barrier as shown on the RAD Drawings. In no case will direct discharge of decontamination water, whether filtered or unfiltered, to surface water be allowed. Sediment retained in the filter fabric or sedimentation basin will be disposed in accordance with the procedures specified in Section 4.4.

7.4. Spill Prevention Control and Countermeasure Procedures

Excavated materials designated for disposal shall be disposed as specified in Section 4.4. Transportation from the ROW to the disposal area shall be in covered trucks to minimize dust and the potential for release. Spills that occur shall be reported and cleaned up in accordance with the Spill Control Plan for the site included in Appendix A.

Petroleum products used to fuel and operate heavy equipment are potential storm water pollutants. These materials shall be stored in accordance with applicable regulations. If construction activities include storing oil in quantities that require a Spill Prevention Control and Countermeasures Plan (SPCC

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Plan) under 40 CFR 112, an SPCC Plan shall be prepared and maintained at the site during construction activities. SPCC Plans shall conform to the requirements of 40 CFR 112. Care shall be taken when vehicles and equipment are fueled and maintained to avoid spilling these materials. The fueling and maintenance activities will be conducted at locations sufficiently distant from the SFCDR to ensure that any potential spills would not likely impact the river. An appropriate quantity of absorbent shall be maintained on hand to assist with cleanup, as necessary should a spill occur. Spills that occur shall be managed in accordance with the SPCC Plan, if one is required. If construction activities do not require an SPCC Plan, then the spill shall be managed in accordance with the procedures presented in Appendix A.

8. Performance Monitoring

Performance monitoring for the Removals, Disposal, and Protective Barrier Component of Work will be addressed within the Project Quality Assurance/Quality Control Plan (QA/QC Plan). This document will be submitted under separate cover for the review and approval of the USEPA. The Project QA/QC Plan will provide procedures to determine compliance with the performance standards as established in the SOW. Performance monitoring activities will include the following:

- Surveying to verify barrier placement and thickness consistent with the RAD Drawings and PMPS;
- Field measurements of depth of excavations and width and thickness of barriers to ensure compliance with the RAD Drawings;
- Chemical analysis of barrier construction materials for metals to confirm that materials met the criteria for clean materials;
- QA/QC testing of asphalt concrete pavement material, including specific gravity and density testing, to confirm that the materials meet the PMPS and QA/QC Plan requirements;
- Compaction and moisture testing of placed barrier materials for compliance with the PMPS and QA/QC Plan requirements; and
- Analysis of growth medium soils for pH, organic matter content and textural classification to ensure that materials meet the PMPS and QA/QC Plan requirements.

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9. Related Project Plans

Activities of this RA Work Plan will comply with the requirements of the site-specific Environmental Health and Safety Plan and Project QA/QC Plan. These companion, or support plans, are intended to ensure that the work is performed adequately and safely such that performance standards are achieved.

9.1. Construction Health and Safety Plan

Activities associated with response action activities within the Wallace Yard, Hercules Mill and Spur Lines shall comply with applicable State and Federal health and safety requirements. A site-specific health and safety plan entitled Environmental Health and Safety Plan, Wallace Yard, Hercules Mill and Spur Lines will be submitted under separate cover for review and approval by the USEPA. The site-specific health and safety plan will be followed by personnel performing activities associated with the removal action.

9.2. Project Quality Assurance/Quality Control

Construction QA/QC will be specified in the QA/QC Plan submitted for review and approval by USEPA under separate cover. The Project QA/QC Plan shall incorporate the frequency of QC and QA testing as required to ensure materials and activities meet the PMPS requirements. This program will ensure that response action activities are conducted in accordance with this work plan and the approved performance standards.

10. Reporting Requirements

This section describes deliverables that will be prepared and submitted to the Governments during implementation of the removal action at the Wallace Yard, Hercules Mill and Spur Lines as described in this RA Work Plan. These future deliverables shall be in conformance with the requirements of the SOW and are described in the following sections.

10.1. Initiation of Operations Reports

The Initiation of Operation Report will provide notification of and documentation supporting commencement of a particular Element of Work, as applicable, under Section 5 of the SOW. The report should include relevant

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analyses, data, and other information used to support that the particular Element of Work has begun at the time specified.

10.2. Pre-certification Inspections

For each of the four subareas, a pre-certification inspection will be requested of EPA within 45 days after completion of each Element of Work, not including any maintenance and repair activities. These inspections will be used to confirm that the completed work meets the requirements of the SOW.

10.3. Completion of Element of Work Reports

The Completion of an Element of Work Report shall be submitted in accordance with the schedule specified in Section 5 of the SOW. This Report should include the following information:

- Overall description of the Report, including purpose and a general description of the portion of the Work covered by the Report and the associated Element of Work. The general description shall include a description of the Work that was undertaken, objectives, period of operation, and Performance Standards.
- Findings and results of the pre-certification inspection, including documentation supporting the conclusion that the Performance Standards, as specified within this SOW, have been attained.
- Certification of construction completion including:
 - A completed punch list from the inspection of the completed construction;
 - A certification by a registered Professional Engineer that construction activities have been completed according to the final design.
 - A Construction As-Built Report that includes the following information:
 - As-built drawings and specifications, signed and stamped by a registered Professional Engineer.
 - QA/QC records (as applicable).
 - Summary of any modifications.

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- Cross-references to relevant or specific information contained in other documents, as appropriate.
- A statement, in the form specified by Section XIV of the CD, by a registered professional engineer that the portion of the Work has been completed in full satisfaction of the requirements of the CD.

10.4. Completion of the Obligation Report

If individual Completion of an Element of Work Report for the four Elements of Work in the SOW were not submitted and approved by EPA, then after the Elements of the Work have been fully performed, as set forth in Paragraph 53, Section XIV of the CD, a Completion of the Obligation Report shall be submitted. The Report shall include the certification statements required by Section XIV of the CD.

10.5. Monthly Progress Reports

The Monthly Progress Reports shall be submitted during project implementation to document the progress or status of the Elements of Work. The reporting period shall begin the day construction starts and shall end the last day of the month that construction ends. Monthly Progress Reports shall include the following basic information as applicable:

- Introduction, including the purpose and general description of the Work conducted during the reporting period;
- Activities/tasks undertaken during the reporting period, and expected to be undertaken during the next reporting period;
- Deliverables and milestones completed during the reporting period, and expected to be completed during the next reporting period;
- Identification of issues and actions that have been or are being taken to resolve the issues; and
- Status of the overall Project Schedule and any proposed schedule changes.

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10.6. Technical Memoranda

Technical Memoranda (TMs) will be submitted as necessary to propose modifications to the work or to final plans, designs, reports, or schedules developed under the SOW. EPA's written approval of the TMs will be obtained prior to implementing such modifications. The TMs will include the following information:

- General description of and purpose for the modification;
- Drawings as applicable;
- Justification, including any calculations, for the modification or waiver request;
- Tasks and activities required to implement the modification, including actions associated with related subsidiary documents, milestone events, tasks, or activities affected by the modification;
- Effect that the modification may have on schedules, future milestones, deliverables and other documents, tasks, activities, or other Work performed under this SOW; and
- Analyses, data, and other information used to support the modification or waiver request and proposed recommendations.

10.7. Incident Reports

Incident Reports for spills will be submitted as necessary and in accordance with State and local regulations.

Removal Action Work Plan

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11. References

MFG, Inc. (MFG), 1999. Wallace-Mullen Branch Draft Soils Sampling Data Report.

U.S. Environmental Protection Agency (USEPA). 2008a. Request for a Removal Action to be Conducted at the Wallace Yard and Spur Lines, Shoshone County, Idaho. March 6.

USEPA. 2008b. Engineering Evaluation /Cost Analysis (EE/CA) Response Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Revision No. 1. Prepared by U.S. EPA Region X. Project No. 415-2328-007 (013). March.

USEPA. 2009. Consent Decree for Wallace Yard and Spur Lines. Civil Action No. 10-2009-0082. (Date to be added when CD entered).

URS Group, Inc. 2004. Technical Memorandum, Big Creek Repository Site Evaluation, Draft Final., Section 4.0: Repository Operations Plan and Waste Acceptance Criteria. June 30.

Table 1. Barriers, Surfacing and Estimated Volumes for the Spur Lines

General Location	Location (Mile Marker)	RAD Drawing Number	Field Observations/Notes ^a	Removal Action	Estimated Volume to be Removed (yd³)	Estimated Volume to be Placed (yd ³⁾
North Side of Canyon Creek	MM 0 to 4.1	SL C7 through SL C14	Rail spur runs beneath paved road.	Remediate road shoulders that are within railroad ROW and within 1,000 feet of residences	TBD	TBD
North Side of Canyon Creek	MM 4.1 to 4.4	SL C14 and SL C15	Railbed being used as dirt trail. Heavy usage.	Cap functional railroad ROW with minimum 12- inch cover.	TBD	TBD
North Side of Canyon Creek	MM 4.4 to 4.9	SL C15	Spur traverses mine waste pile or is not visible.	No further action	Not applicable	Not applicable
North Side of Canyon Creek	MM 4.9 to 5.5	SL C16	Existing unpaved road providing access to residences.	Pave road with asphalt.	TBD	TBD
North Side of Canyon Creek	MM 5.5 to 6.0	SL C17 and SL C18	Actual ROW alignment is shifted down slope from the unpaved road. This section of the Spur Line is very steep and does not appear to be accessible.	No further action.	Not applicable	Not applicable
North Side of Canyon Creek	MM 6.0 to 6.3 (Junction with WIRR)	SL C18	Railbed under road.	Remediate road shoulders within 1,000 feet of residences.	TBD	TBD
North Side of Canyon Creek	MM 6.3 to End	SL C18 and SL C19	Former Hecla Mill area.	No further action.	Not applicable	Not applicable
South Side of Canyon Creek	MM 0 to 0.8	SL C7 and SL C8	Visible, existing portions of railbed that are within residential yard areas. Spur Line being encroached upon by local residence and used for storage/refuse of household materials. Storm drainage problems in area between MM 0.5 and MM 0.75.	Cap functional railroad ROW with minimum 12- inch cover. Coordinate with RUAs. Address drainage issues caused by railbed.	TBD	TBD

General Location	Location (Mile Marker)	RAD Drawing Number	Field Observations/Notes ^a	Removal Action	Estimated Volume to be Removed (yd³)	Estimated Volume to be Placed (yd3)
South Side of Canyon Creek	MM 0.8 to 3.25	SL C8 to SL C12	Floodplain area. Railbed no longer visible, except around power poles.	No further action.	Not applicable	
South Side of Canyon Creek	MM 3.25 to 3.5	SL C13	Visible, existing portions of railbed that are within residential yard areas. Spur Line being encroached upon by local residence and used for storage/refuse of household materials.	Cap functional railroad ROW with minimum 12- inch cover. Coordinate with RUAs.	TBD	TBD
South Side of Canyon Creek	MM 3.5 to 3.75	SL C13	Gem Assay Lab. Old bridge abutment visible. Embankment visible behind lab. ROW to east has been remediated by a combination of Gem Mine remediation and SVNRT removals.	Cap visible embankment – high lead concentrations in A profile.	TBD	TBD
South Side of Canyon Creek	MM 3.75 to 4.9	SL C14 and SL C15	Rail spur runs beneath paved road.	Remediate road shoulders that are within railroad ROW and within 1,000 feet from residences.	TBD	TBD
South Side of Canyon Creek	MM 4.9 to 5.1	SL C16	Abutments and embankments visible.	Cap with 12-inch clean gravel.	TBD	TBD
South Side of Canyon Creek	MM 5.1 to 5.75	SL C16 and SL C17	Embankment not visible.	No further action.	Not applicable	
South Side of Canyon Creek	MM 5.75 to 6.3	SL C17 and SL C18	Embankment visible and being used as access road.	Cap with 12-inch clean gravel.	TBD	TBD
South Side of Canyon Creek	MM 6.3 to 6.95	SL SL C19	ROW part of road.	Cap with 12-inch clean gravel on roadway and shoulders.	TBD	TBD
South Side of Canyon Creek	MM 6.95 to 7.25	SL C19	Spur into Former Hecla Mill area.	No further action	Not applicable	Not applicable
Ninemile Creek	MM 0 to 0.4	SL. C2	Spur line runs behind RV park and is being encroached upon by local residence and used for storage/refuse of household materials.	Cap functional railroad ROW with minimum 12- inch cover. Coordinate with RUAs.	TBD	TBD

General Location	Location (Mile Marker)	RAD Drawing Number	Field Observations/Notes ^a	Removal Action	Estimated Volume to be Removed (yd³)	Estimated Volume to be Placed (yd ³⁾
Ninemile Creek	MM 0.4 to 1.25	SL C2 and SL C3	Railbed is visible, but heavily vegetated with grass. Trail usage appears to be light in this area.	Remediate only those portions adjacent to residences. Coordinate with RUAs.	TBD	TBD
Ninemile Creek	MM 1.25 to 2.25	SL C3 and SL C4	Railbed being used as dirt trail. Heavy access and recreational usage. Major access route to power lines at MM 1.37. Tailings bank visible within railroad ROW at MM 1.6.	Cap functional railroad ROW with minimum 12- inch cover. Remove tailings bank.	TBD	TBD
Ninemile Creek	MM 2.25 to 2.6		Railbed is visible, but heavily vegetated with grass. Trail usage appears to be light in this area.	No further action.	Not applicable	Not applicable
Ninemile Creek	MM 2.6 to 3.1	SL C5	Railbed runs beneath and along shoulder of paved road.	Remediate road shoulders that are within railroad ROW and within 1,000 feet from residences.	TBD	TBD
Ninemile Creek	MM 3.1 to 3.8	SL C5 and SL C6	Existing unpaved road providing access to residences.	Pave road with asphalt.	TBD	TBD
Ninemile Creek	MM 3.8 to End	SL C6	Not accessible steep grade, heavy vegetation.	No further action	Not applicable	Not applicable

^a-Field observations based on USEPA field reconnaissance of Spur Lines in November 2004 and May 2007.

Table 2. Barriers, Surfacing and Estimated Volumes for Wallace Yard and Hercules Mill

General Location	RAD Drawing Number	Removal Action	Estimated Volume to be Removed (yd³)	Estimated Volume to Be Placed (yd³)
Visitor Center Area (West of road and south of I-90)	WY C4	Removal and replacement with vegetated soil cover in discrete areas based on sampling results, as necessary to ensure a 12-inch clean barrier in all areas.	859	859
Parking Area (East of road and south of I-90)	WY C4	Place 12-inch clean gravel barrier with limited removal at the edge of the barrier area to maintain a smooth transition.	esta de	2,445
WY-1 Common Use	WY C6 and WY C7	Place 12-inch clean vegetated barrier.		14,114
WY-2 Common Use	WY C8 and WY C9	Place 12-inch clean vegetated barrier.		22,094
WY-3 Common Use	WY C8 and WY C9	Place 6-inch or 12-inch clean vegetated barrier to ensure a 12-inch cover.		1,434
WY-4 Common Use	WY C6	Hydroseed as necessary to promote vegetative cover for erosion control. Soil removal or capping required related to sample WY-148 only.	375	
I-90 Paved Areas	WY C4 through WY C9	No further action.	Not applicable	Not applicable
Unpaved area between access ramps and main Roadway - Common Use	WY C4 through WY C9	Hydroseed as necessary to promote vegetative cover for erosion control. Soil removal or capping not required due to inaccessibility of area due to steep slopes and proximity to I-90 and entrance/exit ramps.	Not applicable	Not applicable
Hercules Mill	WY C5	Decontaminate foundations. Excavate and dispose of contaminated soils in foundation area. Prevent access to foundations through access controls (fencing). Grade and place 12-inch vegetated or gravel barrier. Hydroseed and add mulch to bare hillside above foundations. Remove and dispose of miscellaneous household refuse and construction debris east of the foundations. Place signage to indicate no trespassing.	(areas to be addressed in foundation to be determined following completion of sampling)	2,462 (gravel barrier in common use areas)

Appendix A

Spill Control Plan

In the event of a spill, the incident will be promptly reported to the Railroad Project Managers. Oversight and cleanup of spilled soil will be performed immediately. The Field Manager will be responsible for ensuring that the contractor conducts an appropriate cleanup and immediately notifies the Government oversight and local emergency management personnel as necessary. Applicable laws and regulations will be followed pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, the Resource Conservation and Recovery Act, and the Toxic Substances Control Act.

During removal activities or other related activities within the Wallace Yard and Spur Lines, soils that are spilled from the loader or excavator in a non-contaminated area will be cleaned up. Immediate action will be taken to isolate and remove the soil and avoid subsequent tracking of these materials. Spilled soils will be recovered using hand tools to the extent practicable. If a large spill occurs, a small front-end loader may be used.

Spill clean-up procedures for truck spills that may occur during transport between the Wallace Yard or Spur Lines and the disposal site will include consolidation of spilled soil and reloading on to the truck. Trucks hauling materials will be equipped with a hand shovel/broom to be used in the event of a spill. If soil is spilled onto pavement, the impacted areas will be swept and contaminated soil returned to the truck. If soil is spilled onto a ground surface adjacent to the road, or a gravel road, the loose material will be collected and the impacted area will be over excavated, as appropriate, to ensure that spilled and potentially impacted soils are removed. If a spill occurs in a high traffic area, traffic cones, flares, signs and flag-persons will be mobilized, as necessary, to direct and control traffic and avoid related accidents. Where such a situation occurs, local law enforcement officials will be informed and consulted.

Verification sampling may be required in the event of a spill and will be coordinated with the Governments. The response action contractor will be required to submit a report of spills within 24 hours of an incident to the Railroad Project Managers and the Government oversight. The report will provide details of the location, date and time of the spill, volume of media spilled, response actions taken, and precautions implemented to avoid future spills.





